

Syllabus

Course Description

Course Title	
Course Code	85271
Course Title Additional	
Scientific-Disciplinary Sector	MATH-01/B
Language	Italian
Degree Course	Advanced training course in Ladin Language and Culture and alpine Anthropology - ANTROPOLAD
Other Degree Courses (Loaned)	
Lecturers	dr. Elisabetta Ossanna, Elisabetta.Ossanna@unibz.it https://www.unibz.it/en/faculties/education/academic-staff/person/52422
Teaching Assistant	
Semester	Second semester
Course Year/s	2
CP	1
Teaching Hours	0
Lab Hours	10
Individual Study Hours	15
Planned Office Hours	
Contents Summary	The course is a workshop designed to address the challenge of designing a mathematics workshop for secondary schools, taking into account the reference frameworks for mathematics teaching and certain aspects relating to 'instructional engineering'. During the course, participants will experiment with a number of maths workshops, breaking down each step and critically analysing the various stages of the design process, including those relating to the materials used.
Course Topics	Variables and equations in a spreadsheet workshop.

	From argumentation to proof in a practical session. Data and representations of the climate crisis with reference to glacier melt: a descriptive statistics workshop. Specific terminology. Neologisms Production of learning units in Ladin
Keywords	Mathematics Education Argumentation The laboratory as a teaching methodology
Recommended Prerequisites	Knowledge of the mathematics topics outlined in the National Guidelines for mathematics.
Propaedeutic Courses	
Teaching Format	The course is taught in a workshop-style format. Emphasis is placed on group work and active learning. The aim is to get students to work together as part of a learning community, with the objective of producing an educational project.
Mandatory Attendance	according to the Regulations
Specific Educational Objectives and Learning Outcomes	To be familiar with the topics covered in mathematics education. To link these to the workshop activities encountered during the course, identifying at which stages of the design and implementation of an educational workshop they play an important role. To be familiar with the mathematical content covered in the workshops. Be able to identify the key concepts and learning objectives of each workshop. Be able to redesign one of the proposed workshops, identifying the appropriate tools and linking the learning objectives to teaching strategies, the sequence of activities and the formulation of tasks.
Specific Educational Objectives and Learning Outcomes (additional info.)	
Assessment	Oral
Evaluation Criteria	The examination assesses students' knowledge of the topics covered in mathematics education, as contextualised within the workshop activities carried out during lessons; it also assesses their ability to link learning objectives with teaching strategies and the tools used. The mark is out of 30 and is calculated as the sum of three components: 1 to 10 points for the assessment of topics in

	mathematics education; 1 to 10 points for the presentation of a workshop of the student's choice; 1 to 10 points for the consistency between the learning objectives and the teaching strategies presented.
Required Readings	R. Zan, <i>Difficoltà in matematica. Osservare, interpretare, intervenire</i>, Springer, 2007 Raccolta di percorsi didattici: https://edulab.unitn.it/dicomat/
Supplementary Readings	R. Duval, <i>A cognitive analysis of problems of comprehension in a learning of mathematics</i>, Educational Studies in Mathematics (2006) 61: 103–131 <i>La matematica dalla scuola materna alla maturità. Proposta di un percorso globale per l'insegnamento della matematica</i>. Edizione italiana a cura di Lucia Grugnetti e Vinicio Villani, Pitagora Editrice, 1999.
Further Information	
Sustainable Development Goals (SDGs)	Quality education, Reduced inequalities, Gender equality